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## Psychological Monographs: General and Applied

## Job Satisfaction as Related to Need Satisfaction in Work

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## I. INTRODUCTION

THE PRESENT study is an attempt to develop a theoretical conceptualization of job satisfaction which will have functional utility.

Work as a psychological function has been the concern of investigators in many fields for the past thirty or more years. The early endeavors by psychologists as well as by researchers of other

disciplines were chiefly directed at determining relationships between various psychophysical and physical characteristics and productivity. Light, noise, and fatigue are typical of the variables selected for investigation. It was more or less natural that the early research work in this field should take this course since much of the impetus was at the time provided by the "scientific management" movement identified with men like Taylor and Gilbreth. However, the insights provided by the Hawthorne experiments (11), which began in 1926, stimulated a shift of emphasis from the physical to the emotional aspects of worker behavior.

Beginning in the 'thirties a large number of social scientists set their sights at understanding the human factors operating in the work environment. Many of them were specifically interested in the factors related to worker adjustment and satisfaction. That psychologists and workers in allied fields have devoted considerable energy to attacks on this problem is attested to by the numbers and variety of research efforts periodically reported by Hoppock (4).

In reviewing the work in this area one has the feeling that the progress made has not been commensurate with the great effort expended. One of the reasons for this is thought to be the specific and empirical nature of the studies con-

<sup>1</sup>The original report of this study was my doctoral dissertation (13). I am especially grateful to Professors Helen M. Walker and Donald E. Super, respectively member and chairman of my faculty project committee, for their valuable and stimulating guidance during the planning, execution, and writing of the study. Professors Nicholas Hobbs and Albert S. Thompson, who also served on the committee, were sources of helpful criticism and constructive suggestions, the former in the design of the experiment and construction of the questionnaire, the latter in the analysis of the data and interpretation of results. Dr. Leonard Small, Mrs. Verna Small, and Dr. Gilbert David provided much help in organizing the manuscript and in improving the presentation of much of the material. My wife has helped by her constant interest and encouragement and by participation in the analysis of the data. A number of other people have generously assisted in other phases of the work. Dr. Randall B. Hamrick of the Community Advisory Service Center in Bridgeport was instrumental in obtaining a number of subjects in that city. Misses Barbara Fenton and Joan Williams, Mrs. Kathryn Feeney, Mrs. Ellen Gotham, Mrs. Ann Groninger, and Mrs. Mary Ann Ripca all assisted in the statistical computations. To all of these, as well as to all those in the cooperating institutions who distributed the questionnaires, and to the subjects who volunteered their time and effort, I am deeply grateful.

ducted. Very few workers have shown a great interest in the theoretical aspects of the problem; most have been content to investigate specific variables without considering how these variables fit into a broader psychological framework. Kornhauser, in discussing the work which had been done before 1944, had this to say:

Generalizations about the importance or unimportance of wages, or advancement, or job security, or personal treatment are shallow and misleading except as they reflect an appreciation of the social-historical changes affecting industry and working people . . . valid conclusions in this matter are like complex clinical judgments, *aided* by whatever scientific evidence is turned up, but necessarily reaching far beyond such data. In the forming of these complex judgments, conceptual guideposts are sorely needed—psychological formulations about motivation and adjustments which will serve to organize thought and inquiry. The development and improvement of these interpretive constructions . . . may prove to be the most valuable contribution psychologists can make in this field (7, p. 143).

Since these words were written there have been many efforts to relate research findings and design to a theoretical framework. The work of Friend and Haggard (2), Roe (10), and Lewin and his co-workers (8), each employing quite different approaches, are notable examples. There have been, of course,

many others. Nevertheless, a theoretical framework providing both an understanding of and potency to deal with this general problem is still lacking.

In developing the theoretical conceptualization with which this study is concerned, we have chosen to deal with human needs and their satisfactions. Work is conceived of as potentially satisfying both primary and secondary needs. This theory has been discussed by Hendricks who states: ". . . work is not primarily motivated by sexual need or associated aggression, but by the need for efficient use of the muscular and intellectual tools, regardless of what secondary needs—self-preservative, aggressive, or sexual—a work performance may also satisfy" (3, p. 311). Hendricks expresses dissatisfaction with the limited view with which the psychoanalytic school regards work, stating that "Clinical psychoanalysis . . . has by no means always recognized work pleasure as a primary psychological motivation" (3, p. 316). We believe with Hendricks that work satisfaction consists of both primary and sublimative satisfactions. In this study an attempt is made to examine need satisfaction in work, and its relationship to job adjustment or "satisfaction."

## II. A THEORY OF JOB SATISFACTION: OUTLINE OF THE STUDY

### A. DEVELOPMENT OF THE THEORY

The theory of job satisfaction selected for investigation is not unique in the sense of applying only to satisfaction in work. Work is seen as simply a special area of human behavior and it is felt that whatever psychological mechanisms operate to make people "satisfied" or "dissatisfied" in general also make them satisfied or dissatisfied in their work. States of tension or dissatisfaction<sup>2</sup> are

aroused when an individual is unable to satisfy certain of his needs. For any individual in any given situation the amount of tension or dissatisfaction generated is determined by (a) the strength of his needs or drives, and (b) the extent to which he can perceive and utilize opportunities in the situation for the satisfaction of those needs. It is sug-

<sup>2</sup> The term "dissatisfaction" is used to mean a conscious recognition of a state of tension.

gested that to understand why a person is dissatisfied with his job one would have to know the extent to which any of his needs are not being satisfied, and the relative strength of those needs. This theory may be formally stated in the following manner:

Over-all job satisfaction will vary directly with the extent to which those needs of an individual which can be satisfied in a job are actually satisfied; the stronger the need, the more closely will job satisfaction depend on its fulfillment.

#### B. SELECTION OF A METHOD

Utilization of the theoretical formulation in understanding and predicting job satisfaction requires the means for measuring need strengths of individuals and need-satisfying opportunities in various work environments. In this study one technique of need measurement was developed and investigated to determine how well job satisfaction could, in fact, be estimated from a measurement of need strengths and need satisfactions in work. The validation of such a technique would of course provide a most useful tool for both vocational counselors and those engaged in personnel selection and placement.

If such a technique were to be validated there would be an additional step necessary before it could actually be made to serve; namely, the exploration of need-satisfying opportunities in various occupational environments.

This whole procedure is similar to that of developing occupational keys for interest questionnaires. E. K. Strong, in discussing the nature of interests, states, "Expressed liking and disliking . . . indicate that once upon a time under certain circumstances that activity brought satisfaction or dissatisfaction" (14). It should be added that when the response is to an activity in which the person has not engaged, it is in terms of a guess as to whether or not it would be satis-

fying. Interest measurement, then, is seen as being a kind of need measurement. Norms can be established for predicting both achievement and satisfaction in many occupational groups, and such attempts have met with considerable success. This is possible only because there is a certain communality of needs among the members of one occupational group, and their occupation allows them to derive common satisfactions therefrom.

Since interest measurement has been a fruitful and by no means an exhausted area of research in this field why do we find it necessary, or even desirable, to develop a different technique? Primarily because an interest score is a statistical measure of the likeness between an individual's pattern of responses and the pattern common among and unique to people in a given occupation, and therefore it is most difficult to conceptualize the individual meaning which may be attached to any score, except by examining the responses to the many interest items. A technique which would measure certain specific needs would permit the same kind of empirical analysis and utility as do the interest measures, but would also make possible a more explicit individual understanding. In counseling, to tell a client that he has a high engineering score is useful, but to be able to explore with him his needs and strivings, to relate his personality to the offerings of an occupation, seems much more profitable. The most impelling reasons for developing a new technique were to make it possible to obtain need-strength measures which could be more easily correlated with other psychological data, and to provide the basis for explicit individual understanding and interpretation on the part of research workers and other users of the technique.

There are many possible techniques which might be used in the measurement of need strengths. They can be thought of as lying along a continuum, their position being determined by the structuring of the technique and the influence of consciously determined responses. At one extreme would be free association and the projective devices, the Rorschach and the Thematic Apperception Test. These techniques tap the unconscious needs and strivings of the individual and the material elicited is not readily determined by conscious thought processes. At the other extreme one might list and define a number of needs or need areas



and have the respondent rank or rate each of them in terms of its importance to himself. Here the individual would respond in terms of his consciously perceived needs. As we move along this continuum from the unstructured to the structured, the data we elicit become more and more superficial. As we move in the opposite direction, the time, expense, and necessary skill of the administrator all become greater. One of the goals of the study was the development of a technique which could be widely used without requiring extensive, specialized training on the part of the administrator. A fairly well-structured questionnaire was considered to be the most easily administered device. It was thought possible to develop a questionnaire of sufficient subtlety to get beyond what the respondent was willing to report of what he was willing to perceive, and to avoid the effects of cultural value norms upon the expression of certain types of needs.

#### C. THE NEEDS MEASURED

A structured measurement limits the areas which may be measured. Deciding which needs to measure presented difficulties. Murray's list (9) was a starting point, but some of the needs which he describes could not be measured by a technique as structured as a questionnaire. Also, his list was considered too lengthy for complete inclusion in this initial effort. A list of twelve needs was evolved, most of which are similar to Murray's, although they are defined and named somewhat differently here.

Six criteria were used in selecting the needs. For inclusion each need should be one which:

1. if present in a person is likely to be a rather permanent and stable part of his basic personality structure—an ever-

present factor in the determination of adjustment;

2. is judged to be relatively important in the determination of adjustment, although differing in degree of importance among individuals;

3. is present in many people;

4. might conceivably be satisfied in a work environment;

5. is definable and unique;

6. is amenable to measurement by a paper-and-pencil questionnaire.

Twelve needs which met the criteria requirements were chosen. The list of needs with the definition of each is presented below:

A. *Recognition and Approbation.* The need to have one's self, one's works, and other things associated with one's self known and approved by others.

B. *Affection and Interpersonal Relationships.* The need to have a feeling of acceptance by and belongingness with other people. The need to have people with whom to form these affective relationships.

C. *Mastery and Achievement.* The need to perform satisfactorily according to one's own standards. The need to perform well in accordance with the self-perception of one's abilities.

D. *Dominance.* The need to have power over and control of others.

E. *Social Welfare.* The need to help others, and to have one's efforts result in benefits to others.

F. *Self-expression.* The need to have one's behavior consistent with one's self-concept.

G. *Socioeconomic Status.* The need to maintain one's self and one's family in accordance with certain group standards with respect to material matters.

H. *Moral Value Scheme.* The need to have one's behavior consistent with some moral code or structure.

I. *Dependence*. The need to be controlled by others. Dislike of responsibility for one's own behavior.

J. *Creativity and Challenge*. The need for meeting new problems requiring initiative and inventiveness, and for producing new and original works.

K. *Economic Security*. The need to feel assured of a continuing income. Unwillingness to "take a chance" in any financial matters.

L. *Independence*. The need to direct one's own behavior rather than to be subject to the direction of others.

### III. THE QUESTIONNAIRE

A questionnaire (12) was designed to measure three variables:<sup>3</sup> (a) the strength of each of the twelve needs selected; (b) the degree to which each of the twelve needs was being satisfied in the individual's job; and (c) the individual's over-all job satisfaction. Since the measurement of the strength of the needs was the most important as well as the most difficult of the three, the largest part of the questionnaire was devoted to it. A five-part questionnaire was developed, of which three parts were devoted to the measurement of need strengths, one to the measurement of need satisfactions in work, and one to over-all job satisfaction. These parts of the questionnaire will be discussed below.

#### A. MEASUREMENT OF THE STRENGTH OF NEEDS

Sections A, C, and E of the questionnaire, each containing a unique type of item, are devoted to the measurement of need strengths. In designing these items maximum subtlety was a prime consideration.

The items in part A consist of quotations, each representing verbal expression of one of the needs in a "conversational" manner. The respondent is instructed to rate each item on a five-point scale to

show how closely the feelings expressed in the quotation match his own feelings. There are 48 items in part A; four items are keyed to each of the 12 need-strength scales.

In part C the items are designed to get at the strength of needs through identifications, value judgments, and projections. These items are also rated to indicate degree of agreement with the idea expressed. They are in multiple-choice format, but differ from multiple-choice items in that every response is rated. There are 36 such items in part C; three are keyed to each of the need-strength scales.

Part E consists of items which ask the respondent to imagine himself in a number of occupations. For each occupation several possible sources of satisfaction are described. The respondent indicates by a rating his estimate of the extent to which each of these described satisfactions would be a source of satisfaction to him were he in that occupation. For these items the rating is again made on a five-point scale. There are 48 such items in part E; four are keyed to each of the need-strength scales.

To recapitulate, the strength of each need is measured by eleven items, four in part A, three in part C, and four in part E, making a total of 132 items devoted to measurement of need strengths.

<sup>3</sup>The complete questionnaire is presented in the Appendix.

#### B. MEASUREMENT OF NEED SATISFACTION IN WORK

Part D of the questionnaire is designed to measure the extent to which each of the 12 needs is satisfied in the respondent's job. The degree of subtlety required in measuring this variable is considered to be less than in measuring the need strengths. Individuals can achieve greater accuracy in perceiving the extent to which a given need is satisfied than in estimating the degree of importance which they actually attach to it. Therefore these items are rather straightforward. For each need, two statements (each somewhat differently worded) were presented. Each expresses a high degree

of satisfaction with the given need. The respondent rates his satisfaction on a five-point scale: 5 if he agrees that the need is completely satisfied in his job, 1 if he feels the need not at all satisfied.

#### C. MEASUREMENT OF OVER-ALL JOB SATISFACTION

Over-all job satisfaction was measured in part B of the questionnaire. There are three items, two of which are similar to those originally used by Hoppock (5, pp. 250-251) in his study on job satisfaction. A third, open-ended question followed these two. In the actual analysis of the data gathered in the study only one of the three items was used as the index of job satisfaction.<sup>4</sup>

### IV. THE SAMPLE

The desire for a careful sampling to use in studying the questionnaire and in exploring the validity of the hypothesis was tempered by a number of realistic considerations. The length of the questionnaire and the time demanded for completing it (at least an hour in most cases) made it difficult to obtain subjects. Employed men were sought in a number of business institutions and vocational guidance agencies. They were obtained through the cooperation of personnel executives or other administrators ("contact persons"). The results of the study were in general of little interest to these people because of the somewhat technical and theoretical nature of the investigation, and those who were willing to cooperate did so just to be helpful to the author. In no case was the questionnaire filled out on "company time"; the contact persons had to obtain the cooperation of a number of people in their institutions without offering any reward for the effort.

In no case was it possible for the author either to select the subjects or to take part in the actual distribution of the questionnaires. This was done by the contact persons.

In each of the cooperating business organizations the questionnaire distribution was handled by either a personnel executive or some other high level administrator. The purpose of the study was explained to the contact person and an effort was made to convince him of the necessity for avoiding any personal bias in his selection of subjects. To each questionnaire was attached a stamped envelope addressed to the author at Columbia University. After receiving the questionnaires the subjects were then free to do as they pleased with them without pressure from those who had distributed the questionnaire. They could fill them out and mail them to the

<sup>4</sup>The reasons for elimination of the other two items are discussed in Chapter V.



TABLE 1  
TYPES OF INSTITUTION REPRESENTED  
IN THE SAMPLE

Institution	Number of Subjects
Two large industrial manufacturing plants	31
Large department store	13
Two government agencies engaged in technical work	20
Two philanthropically supported vocational guidance agencies	8
Total	72

author or not—there was no way for anyone to know who had and who had not filled out the questionnaires. This guarantee of anonymity also mitigated any feeling of having to give "favorable" answers.

In the vocational guidance agencies the distribution was handled by individual counselors who gave the questionnaires to employed clients and received them when the clients had filled them out. There was no anonymity for the vocational guidance subjects, but it is doubtful if this had any effect on their responses since the questionnaires were administered as part of the psychometric routine.

One hundred thirteen questionnaires

TABLE 2  
AGE OF THE RESPONDENTS

Age (In Years)	Frequency
15-19	1
20-24	9
25-29	19
30-34	11
35-39	11
40-44	4
45-49	5
50 or over	6
(No response)	(1)
Total	67

TABLE 3  
SALARY OF THE RESPONDENTS

Salary (Dollars per Week)	Frequency
\$25-29	2
30-39	3
40-49	9
50-59	4
60-69	13
70-79	8
80-89	6
90-99	8
100-109	6
110 or over	5
(No response)	(3)
Total	67

were distributed during the spring of 1950, and 72 were returned to the author. Table 1 presents a frequency distribution of the subjects in terms of the type of institution from which they were obtained. Sixty-seven of the respondents filled out a personal data form which enables us to present the age and salary distributions as well as an occupational grouping of the sample. The occupational classification is based on Part II of the *Dictionary of Occupational Titles*. These data are presented in Tables 2, 3, and 4.

TABLE 4  
OCCUPATIONAL CLASSIFICATION OF  
THE RESPONDENTS

Occupational Classification	Frequency
0. Professional and Managerial	(37)
Professional	22
Semiprofessional	12
Managerial and official	3
1. Clerical and Sales	(20)
Clerical and kindred	10
Sales and kindred	10
4. Skilled	(8)
Skilled occupations in manufacturing	1
Skilled occupations in non-manufacturing	1
Foremen	6
6. Semiskilled	(2)
Semiskilled occupations in manufacturing	2
Total	67

This sample is obviously atypical of the total working force and is certainly not to be considered a random sample of that population. The group is young—very few subjects are over forty. The group is a high level one, with a large concentration of professionals, semiprofessionals, and clerical and sales people, very few semiskilled people, and no representation from the unskilled, service, or agricultural occupations. This selectivity was intentional rather than fortuitous. The first form of the questionnaire is rather long and the language somewhat difficult. It was considered desirable

to exclude individuals who might have insufficient verbal facility. Before the questionnaire could be used with subjects having lower verbal ability it would have to be revised and simplified.

The nature of the sample does not destroy the utility of the findings. Although one would not generalize results obtained from this sample to the total employed population without further verification, the psychological factors under investigation here appear universal and not limited to any one occupational level or group.

## V. RESULTS

### A. STRENGTH OF NEEDS

#### 1. Determination of a Need-Strength Index

As described in Chapter III, the strength of the various needs was measured in three parts of the questionnaire containing 132 items, each keyed to one or another of the 12 needs; these are actually twelve 11-item scales. Every item was rated by the respondents on a five-point scale ranging from 5 (greatest

strength) to 1 (least). By adding the 11 ratings assigned to the items on any one scale a value which we call the "absolute score" is obtained. The highest possible score for a given scale is 55 and the minimum 11. Using these absolute scale scores, each individual's needs were rank ordered from 1 (the strongest need) to 12 (the weakest need). For each need area both the mean absolute score and the mean rank for the entire sample group ( $N = 72$ ) were computed. The results of this computation are presented in Table 5. They have been arranged in the table in what might be thought of as a need hierarchy for this sample, with the needs which are strongest heading the list.

As would be expected, the absolute score values and the rank values each yield identical hierarchies for the whole group. Despite this agreement between the two types of scores for the group there is considerable difference between using absolute scores and ranks as indices of need strength for individuals. The absolute scale scores are determined by two factors: (a) the strength of each need as compared with the individual's other needs and (b) error. It is our belief that a large part of this error is due to the systematic differences among individuals in their tendency to use high or low or middle-of-the-

TABLE 5  
MEAN ABSOLUTE SCORE AND MEAN RANK OF EACH NEED

Need Area	Mean Absolute Score of Need	Mean Rank of Need
J. Creativity and Challenge	44.7	2.8
C. Mastery and Achievement	43.8	3.1
E. Social Welfare	40.4	4.9
H. Moral Value Scheme	40.0	5.1
B. Affection and Interpersonal Relationships	39.5	5.2
F. Self-expression	35.9	6.6
D. Dominance	34.7	7.1
A. Recognition and Approbation	34.3	7.5
K. Economic Security	32.8	7.8
L. Independence	30.8	8.6
G. Socioeconomic Status	30.8	8.9
I. Dependence	25.1	10.8

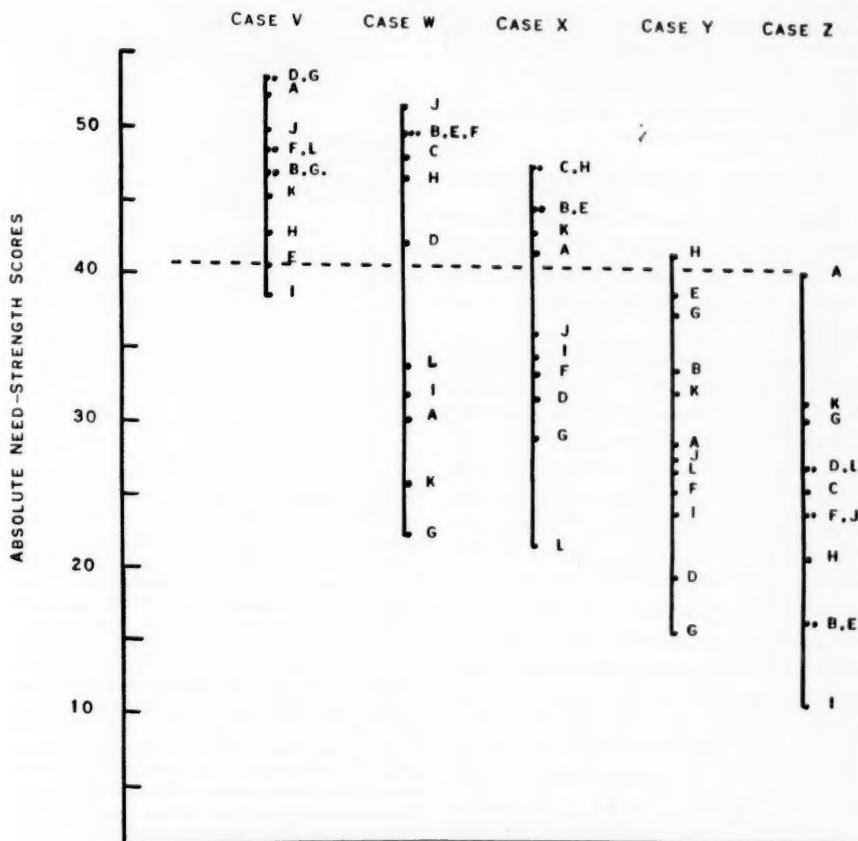


FIG. 1. Absolute Need-Strength Scores of Five Subjects.

range ratings consistently. This is graphically demonstrated in Figure 1 where the absolute scale scores of five subjects' needs have been plotted.

If the absolute scale scores were used as the measure of need strengths, it would be necessary to assume (referring to the subjects in Figure 1) that ten of the needs of subject V are stronger than any of the needs of subject Z. Thus, if the absolute scores were used as indicators of need strength, a need which ranks almost at the bottom of V's hierarchy would be considered as important to him as Z's highest ranking need, since they both have the same absolute score. This is not a very tenable assumption. On the other hand, it is not unreasonable to consider the most important and the least important need of each person equivalent to the most im-

portant and the least important need of the other individuals. *The ranks were considered preferable as indicators of need strengths*, and the decision was made to use them. Though some error is involved in the assumption of rank equivalency (the most important needs of some people may not be sampled in the questionnaire, and ranking makes the assumption of equal intervals "within" individuals), it is believed that the error introduced by using rank scores is far less than that introduced by using absolute scores.

In connection with this decision it should be noted that the use of the rank scores also yields a more valid estimate of reliability of the strength scales. This is so because computation of the reliability using the absolute scores would treat that part of the variance produced by the

individual rater bias described above (i.e., consistently high, low, or middle-of-the-range ratings) as systematic variance when it is, in fact, error variance. Since this between-persons variance is rather great, the reliability estimates would be spuriously large.

## 2. Reliability of Need-Strength Scales

Because of the analyses which are made later in the paper it is necessary to consider two kinds of reliability with respect to the measurement of need strengths.

The question which the first reliability estimate must answer is: How certain can we be of the rankings of the 12 needs for any individual in our sample? How trustworthy is the hierarchy obtained for each person? This is the question of reliability among the 12 needs "within" individuals (there are 72 such estimates possible—one for each case in the sample). To estimate this reliability 35 of the 72 cases were selected at random. For each case the need strengths were ranked independently on the basis of the absolute scores obtained on part A of the questionnaire, then on the scores obtained on part C, and then part E. These rankings were based on subscales having 4, 3, and 4 items respectively. Coefficients of concordance<sup>3</sup> were computed to indicate agreement among the three sets of ranks "within" each individual. The distribution of these coefficients is presented in Table 6.

This analysis is similar to any split-part reliability estimate. The estimate is based on a number of measurements (two usually, three in this case), each of which is shorter than the one for which the reliability estimate is sought. Since the length of a test or questionnaire affects its reliability, the subpart estimates are too small. The

<sup>3</sup> A coefficient of concordance is equal to the mean rank-order correlation of more than two sets of ranks taken two at a time in all possible combinations. In this case there would be three such combinations: A with C, A with E, and C with E (14).

TABLE 6  
RELIABILITY OF THE NEED-STRENGTH  
HIERARCHIES FOR 35 SUBJECTS

Coefficients of Concordance among Subsections	Spearman-Brown Approximation of Full-Scale Reliability	% of Cases ( <i>N</i> = 35)	Cumulative %
.70-.74	.88-.90	11	11
.65-.69	.85-.87	9	20
.60-.64	.82-.84	11	31
.55-.59	.79-.81	14	45
.50-.54	.75-.78	16	61
.45-.49	.71-.74	6	67
.40-.44	.67-.70	9	76
.35-.39	.62-.66	9	85
.30-.34	.56-.61	6	91
.25-.29	.50-.55	0	91
.20-.24	.43-.49	6	97
(.06)	(.16)	3	100

Spearman-Brown prophecy formula provides a correction for the underestimates of the subpart analysis. Since the subparts in this case differ in length and since the rank scores whose reliabilities we seek are not the means of the subpart rank scores, the formula is not strictly applicable in this case and does not provide an exact estimate of the rank-score reliabilities because of these inconsistencies. It is felt, though, that the corrected estimates are considerably closer to the actual values than are the uncorrected estimates based on subparts, each about one-third the length of the total scales. The Spearman-Brown values have therefore been included in the table as being the best possible estimates (the corrections were computed for tripled length). About three-fourths of the full-scale estimated reliability coefficients are .67 or greater.

The other question of reliability of the need-strength scales is this: How certain can we be of the rankings of all the individuals in the sample on any one need? If five individuals were selected, for each of whom the rank of a given need is 1, and five other individuals, for each of whom the rank of that same need is 2, how certain can we be that these two groups of individuals actually differ with respect to the relative strength of that need? This is the question of reliability of each need scale for the entire sample (there are 12 separate estimates required—one for each need-strength scale). Here

TABLE 7  
NEED-STRENGTH SCALE RELIABILITIES  
COMPUTED BY ANALYSIS OF VARIANCE

Need Area	Coefficient of Reliability
A. Recognition and Approbation	.53
B. Affection and Interpersonal Relationships	.60
C. Mastery and Achievement	.41
D. Dominance	.64
E. Social Welfare	.92
F. Self-expression	.65
G. Socioeconomic Status	.66
H. Moral Value Scheme	.63
I. Dependence	.44
J. Creativity and Challenge	.73
K. Economic Security	.80
L. Independence	.82

we are concerned with one need and all the cases (even though the reliability of the rank scores on any one scale is obviously dependent on the reliabilities of the other scales); in the previous analysis we were concerned with one case and all the needs. The technique used to estimate these reliabilities is analysis of variance. It is a method somewhat similar to that described by Ebel (1).

The analysis is again based on the rankings on the subparts of the questionnaire. The three subrankings of a given need for any individual are considered to be independent estimates of the actual rank of that need. The total variance of these estimates (based on  $3 \times 72 = 216$  estimates) can be separated into: (a) variance among individuals, (b) variance among subsections, and (c) error. The coefficient of reliability for a particular need-strength scale would then be given

by this formula:

$$r = 1 - \frac{\text{Mean error variance}}{\text{Mean variance among individuals}}$$

The results of this analysis are presented in Table 7. Nine of the 12 scales have coefficients of reliability equal to or greater than .60, while two of them are less than .50.

It should again be noted that the reliability estimates will be somewhat inexact because the actual rank scores are not the means of the three subsection ranks, but are arrived at through use of the total absolute scale scores.

In the present study no attempt was made to investigate the reliability of the need-strength scales over a period of time. Obviously, for the instrument to have value in vocational counseling and personnel placement, it is essential that error due to passage of time be slight. Although one of the criteria for selecting the needs was stability, there is no measure of the scales' stability at the present time.

### 3. Relationships among the Need-Strength Scales

One of the criteria in selecting the needs to be investigated was the independence or uniqueness of each. To determine if this aim was accomplished, coefficients of correlation were computed between the rank scores on each need-strength scale and all the others. The results of this analysis are presented in Table 8.

TABLE 8  
INTERCORRELATIONS AMONG THE NEED-STRENGTH SCALES

Variable	A	B	C	D	E	F	G	H	I	J	K	L
A. Recognition and Approbation												
B. Affection and Interpersonal Relationships	-.10											
C. Mastery and Achievement	-.23	.25										
D. Dominance	.19	-.22	.19									
E. Social Welfare			-.05	.04								
F. Self-expression				-.13	-.26							
G. Socioeconomic Status				-.43	.35	-.36						
H. Moral Value Scheme					-.04	-.56	.33					
I. Dependence						-.12	-.09	-.17				
J. Creativity and Challenge								-.34	-.34			
K. Economic Security									.12	-.00		
L. Independence										-.29	-.44	



TABLES 9a and 9b  
INTERCORRELATIONS WITHIN TWO CLUSTERS OF NEED-STRENGTH SCALES

Variable	A	D	G	L	Variable	B	E	H	I
A. Recognition Approbation		.25	.29	.29	B. Affection and Relationships		.19	-.03	.23
D. Dominance			.35	.11	E. Social Welfare			.33	.40
G. Socioeco- nomic Status				.12	H. Moral Value Scheme				.12
L. Independence					I. Dependence				

An inspectional analysis of the table of intercorrelations indicates that in general the scales are fairly independent of each other. However, it is possible (by inspection) to extract two clusters of scales which are (with one minor exception) positively correlated among themselves but negatively correlated with each other. This is shown in Tables 9a, 9b, and 9c.

TABLE 9c  
CORRELATIONS BETWEEN EACH NEED-STRENGTH SCALE IN ONE CLUSTER AND THOSE OF THE OTHER CLUSTER

Variable	A	D	G	L
B. Affection and Relationships	-.10	-.21	-.22	-.29
E. Social Wel- fare	-.46	-.43	-.56	-.58
H. Moral Value Scheme	-.34	-.36	-.34	-.39
I. Dependence	-.34	-.23	-.34	-.40

In one of these clusters are grouped the needs for affection, for helping others, for living according to some restraining code of behavior, and for being dependent. These needs have in common the deference of the ego—the restraining of assertive or aggressive impulses. Psychoanalytically, the expression of such needs might be interpreted as defenses against the recognition of aggression or hostility.

In the other cluster are the needs for recognition, dominance, status, and independence: ego-assertive needs. Theoretically it is conceivable that the better-adjusted respondents were able to recog-

nize and accept the presence of the assertive needs more easily than the less well-adjusted respondents. This would account for the emergence of these two clusters. Despite these within-sample differences it should be noted that, as might be expected, the ego-restraining and ego-deferential needs are rated stronger for the sample as a whole than are the assertive, possibly aggressive needs (with the exception of the need for Dependence, which is more or less taboo for the adult male in our culture).

We shall refer to these findings later in interpreting the results of the hypothesis-testing analyses.

#### B. SATISFACTION OF NEEDS

As described in Chapter III, the degree to which each of the needs is being satisfied in the jobs of the respondents was measured in part D of the questionnaire. There are 24 items in this section, two for each need area. The items were rated by the respondents on a five-point scale, 5 representing maximum satisfaction and 1 minimum or no satisfaction. The mean of the two responses was used as the index of need satisfaction (with the exception of three scales discussed below). In order to estimate the reliability of these two-item scales, a product-moment correlation was computed between ratings on the two items in each pair. To arrive at an estimate of the reliability of the mean of the pairs, the Spearman-Brown prophecy formula was used. These

TABLE 10  
RELIABILITIES OF THE NEED-  
SATISFACTION SCALES

Need Area	Correlation between Item Pairs	Estimated Full-Scale Reliability (Spearman- Brown)
A. Recognition and Approbation	.66	.80
B. Affection and Inter- personal Relationships	.20	.33
C. Mastery and Achievement	.29	.45
D. Dominance	.61	.76
E. Social Welfare	.49	.66
F. Self-expression	.06	.11
G. Socioeconomic Status	.63	.77
H. Moral Value Scheme	.48	.65
I. Dependence	.71	.83
J. Creativity and Challenge	.72	.84
K. Economic Security	.78	.88
L. Independence	.53	.70

values are presented in Table 10. Nine of the scales have reliability coefficients of .65 or greater.

Since these scores were to be used in a correlation analysis, it was felt that the reliabilities of scales B (Affection and Interpersonal Relationships,  $r = .33$ ), C (Mastery and Achievement,  $r = .45$ ), and F (Self-expression,  $r = .11$ ) were so low as to preclude any useful analyses. Examining the low-reliability pairs with hindsight's sharpened perceptions and comparing them with the more reliable pairs (see Appendix) leaves no cause for wonder at the low coefficients obtained. Two possible courses of action are: (a) not to use the three unreliable scales in any of the further analyses, or (b) use one item from each pair for the need-satisfaction score. Since there are only 12 needs, the first alternative seems unnecessarily wasteful. In each of the three pairs it is possible to choose the more desirable item with little difficulty. In the Affection and Interpersonal Relationships scale, item D<sub>2</sub> relates directly to satisfaction derived on the job, whereas item D<sub>16</sub> refers to off-the-job satisfactions and is in terms of time rather than the need itself. In the Mastery and Achievement scale, item D<sub>3</sub> seems to relate directly to the concept involved, whereas item D<sub>14</sub> does not and is, moreover, somewhat confusing since it asks two questions rather than one. In the Self-expression scale, it was felt that the interpretation of "self-expression" in item D<sub>6</sub> would vary from subject to subject.

This expression was not used in measuring the strength of that need; instead, the concept of being one's self or "letting yourself go" was used. Therefore item D<sub>2</sub> was chosen as the measure of satisfaction of the Affection and Interpersonal Relationships need, D<sub>3</sub> for the Mastery and Achievement scale, and D<sub>21</sub> for the Self-expression scale. That satisfaction of each of these needs is being measured by only one item should be borne in mind.

It should be noted that the reliability estimates of the need-satisfaction scales, like those of the need-strength scales, do not take into account any fluctuation with the passage of time. Stability over periods of elapsed time is as necessary in the case of need satisfactions as it is for need strengths for the technique to be of practical use.

Using the scores described above, for each need the mean satisfaction score and the standard deviation of the satisfaction scores were computed for the sample. These are presented in Table 11.

To make Table 11 more meaningful, the scale values which the respondents used are described here:

- (5) completely satisfied
- (4) very well satisfied
- (3) well satisfied
- (2) slightly satisfied
- (1) not at all satisfied

TABLE 11  
MEAN AND STANDARD DEVIATION OF NEED-  
SATISFACTION SCALES ( $N = 72$ )

Need Area	Mean Satis- faction Score	SD
H. Moral Value Scheme	3.94	1.16
J. Creativity and Challenge	3.70	1.16
F. Self-expression	3.68	1.10
B. Affection and Interpersonal Relationships	3.67	1.09
L. Independence	3.60	.96
I. Dependence	3.58	1.28
K. Economic Security	3.43	1.22
E. Social Welfare	3.40	1.06
C. Mastery and Achievement	3.20	1.39
A. Recognition and Approba- tion	3.00	1.12
G. Socioeconomic Status	2.83	1.06
D. Dominance	2.73	1.19

In general there is no uniformity of feelings of satisfaction in any of the need areas. The standard deviations of about 1 indicate that in each area there are some subjects who are well satisfied and some who are not, since the mean values tend to center around the neutral or slightly favorable point. (If each of the 5 ratings on any scale occurred with equal frequency, the standard deviation would be 1.41.) It is interesting to note that the needs which we have called the "passive, hostility-restraining" needs are in general felt to be more satisfied than the assertive, aggressive needs. Is it possible that our hypothesized less well-adjusted people not only must feel that these needs are important to them, but must feel that they are being satisfied?

Because these scales are later used in correlation analyses, the fact that the standard deviations are fairly homogeneous should be noted. Were they markedly varied, interpretation of the correlation coefficients would be made more difficult.

### C. OVER-ALL JOB SATISFACTION

There were three items on part B of the questionnaire designed to measure over-all job satisfaction. One of these items is an open-ended question; it was intended to have the responses to this item rated by several judges in terms of over-all satisfaction. Unfortunately the majority of the responses did not lend themselves to this kind of judgment. The other two items are similar to those developed by Hoppock (5, pp. 250-251). A number of people who examined the questionnaire (other than the respondents) felt that item B<sub>2</sub> (see appendix) was confusing and difficult to answer. Since the third item (B<sub>1</sub>) seemed to get at over-all satisfaction in a direct and simple way, it was used in the analyses.

Item B<sub>1</sub> is presented below with a frequency distribution of responses to it.

Item B<sub>1</sub>:

If I were to rate my general, over-all feelings about my job, I would say that I usually:

a. like it <i>extremely well</i> .....	16
b. like it <i>very much</i> .....	31
c. like it <i>quite a bit</i> .....	11
d. like it <i>fairly well</i> .....	9
e. like it <i>just a little</i> .....	0
f. neither like nor dislike it .....	3
g. <i>dislike</i> it .....	2
h. <i>hate</i> it .....	0

In assigning values to this scale it was recognized that the intervals were probably not equivalent. No other valid assumption about the size of the intervals can be made however, and, as was done in the need-satisfaction scales, linear values were assigned,  $a = 8$ ,  $b = 7$ , and so on.

The distribution of responses to item B<sub>1</sub>, given above, is similar to others which have been obtained in samples of employed people. Usually there is a highly skewed distribution with very few people expressing strong dissatisfaction with their jobs. We cannot attempt an absolute valuation of the responses to this item and decide who are the "satisfied" and who the "dissatisfied." Our only assumption is that those who answer higher on the scale are taken to be the more satisfied, those at the lower end the more dissatisfied.

In treating the need-strength scores a correction was made for what we referred to as respondent "bias"—a tendency to use responses at one part of the scale—and ranks were used rather than absolute scores. This was not done for the need-satisfaction scales. It was not difficult to conceive of some people having most of their needs well satisfied in their work and others not. We could, therefore, accept the possibility that one subject's need *satisfactions* are all greater than

TABLE 12

FREQUENCY DISTRIBUTIONS OF (1) THE SUMMED NEED-STRENGTH RATINGS, (2) THE SUMMED NEED-SATISFACTION RATINGS, AND (3) THE OVER-ALL JOB-SATISFACTION RATING FOR THE 20 SUBJECTS HAVING THE HIGHEST SUMMED NEED-STRENGTH RATINGS (H) AND THE 20 HAVING THE LOWEST (L)

Sum of Need-Strength Ratings	Frequency Distributions		Sum of Need-Satisfaction Ratings	Frequency Distributions		Over-All Job-Satisfaction Ratings	Frequency Distributions	
	H	L		H	L		H	L
			114-117	1	0			
560-579	1		110-113	1	1			
540-559	2		106-109	3	0			
520-539	1		102-105	1	0			
500-519	3		98-101	0	1			
480-499	9		94-97	1	1			
460-479	4		90-93	2	2			
440-459			86-89	2	1			
420-439			82-85	3	1			
400-419			78-81	1	3			
380-399	7		74-77	3	4	8	6	3
360-379	5		70-73	0	1	7	7	10
340-359	6		66-69	1	2	6	3	4
320-339	1		62-65	0	3	5	3	2
300-319	0		58-61	0	0	4	0	0
280-299	1		54-57	1	0	3	1	1
Total	20	20		20	20		20	20

another's, although in the case of need strengths the assumption of rank-equivalence was considered desirable as a correction for rater bias. In the case of the over-all satisfaction scores there was no choice but to use the absolute values.

A valid question then is whether the respondent bias on the strength-of-need scales is carried over to the other scales. Do the people who tend to use high (or low) ratings on the need-strength scales (parts A, C, and E of the questionnaire) also use high (or low) ratings in the need-satisfaction and over-all job-satisfaction scales (parts B and D of the questionnaire)? If this is the case, an error has been committed in the treatment of the data. To see if this does occur, the 20 individuals whose summed need-strength ratings are highest were compared to the 20 whose summed need-strength ratings are lowest. Table 12 allows a comparison of the distributions of these two groups in terms of (a) the sum of each person's need-strength ratings (for the 132 items in parts A, C, and E of the questionnaire), (b) the sum of each person's need-satisfaction ratings (for all the items in part D of the questionnaire), and (c) each person's over-all job-satisfaction rating (item B1).

Although the distributions of the two groups are markedly different with respect to need-strength ratings (as might be expected—see Figure 1), they do not differ significantly with respect to their need-satisfaction or over-all satis-

faction ratings. We can conclude that the tendency to use high or low ratings in responding to the need-strength scale items is not carried over to the other two scales.

#### D. RELATIONSHIP BETWEEN NEED STRENGTH AND NEED SATISFACTION

A possible relationship between need strengths and need satisfactions was suggested to the author. Perhaps the degree of frustration of a need affects the perceived strength of that need. A need which is well satisfied may not be felt to be as strong as one which is frustrated. Were this true, it would cast some doubt on the validity of the need-strength measures. Two analyses were made to test this possibility.

Thirty-five cases were selected at random from the sample. The need satisfactions for each were ranked, 1 being the most satisfied need and 12 the least satisfied. Then rank-order coefficients of correlation were computed between the need strengths and the need satisfactions for each individual. Were the hypothesis true, these coefficients would be negative in sign. A frequency distribution of these coefficients is presented in Table 13. They vary in size from .71 to -.45; the median value is .08. This distribution

TABLE 13  
RANK-ORDER CORRELATION COEFFICIENTS BETWEEN RELATIVE NEED STRENGTHS AND RELATIVE NEED SATISFACTIONS ( $N=35$ )

Rank-Order $r$	Frequency
.61-.71	2
.50-.60	4
.39-.49	3
.28-.38	3
.17-.27	2
.06-.16	4
-.05-.05	7
-.16-.06	2
-.27-.17	4
-.38-.28	3
-.49-.39	1
Total	35

does not lend support to the suggested hypothesis.

In a second test of the hypothesis the 30 subjects having the highest need-strength scores on each need were compared with the 30 having the lowest. Were the hypothesis true, those scoring higher on a particular need-strength scale would be expected to have a lower satisfaction score. The results of this analysis showed that, for 6 of the 12 needs, the difference is in the hypothesized direction, and for 6 is in the reverse direction. There is no significant difference in need-satisfaction scores between those having higher and lower need-strength scores.

These two analyses indicate that the hypothesis concerning the relationship between the two variables is not substantiated.

#### E. JOB SATISFACTION AS RELATED TO NEED SATISFACTION

The purpose of this study was to develop an instrument which could be used successfully to estimate job satisfaction from measures of need satisfaction and need strength. In this section a number of analyses are presented which help to evaluate the utility of the technique.

The first and most simple relationship studied was that between need satisfaction and job satisfaction, without taking need strengths into account. Using the entire sample a product-moment correlation was computed between over-all job satisfaction and the mean of the twelve

need-satisfaction scores for each individual. The value of the obtained  $r$  was .44.

According to the theoretical formulation upon which this study is based, the extent to which needs of varying strength are satisfied should have differing effects on over-all satisfaction. Therefore, to see the effect of taking into account the differences in strength of the needs, the satisfaction score of each need was multiplied by its rank strength score. The mean of these products for each individual is a weighted need-satisfaction score. Over-all satisfaction was then correlated with this value and the resulting  $r$  was .48. The improvement in prediction over the .44 correlation of the unweighted satisfaction scores is insignificant.

Several other analyses were made in an attempt to understand the absence of significant improvement. Correlations were computed between: (a) over-all satisfaction and satisfaction of each person's *most* important need, (b) over-all satisfaction and the mean satisfaction of each person's *two* most important needs, (c) over-all satisfaction and the mean satisfaction of each person's *three* most

TABLE 14  
CORRELATION BETWEEN OVER-ALL JOB SATISFACTION AND THE SATISFACTION OF SUCCESSIVE NUMBERS OF NEEDS FROM ONE TO TWELVE

Successive Numbers of Needs	Correlation between Mean Satisfaction of These Needs and Over-all Satisfaction
a. first need	.54
b. first 2 needs	.58
c. first 3 needs	.57
d. first 4 needs	.51
e. first 5 needs	.49
f. first 6 needs	.47
g. first 7 needs	.44
h. first 8 needs	.44
i. first 9 needs	.45
j. first 10 needs	.45
k. first 11 needs	.46
l. all 12 needs	.44



important needs, etc. The results of this analysis are presented in Table 14.

The results in Table 14 indicate that, with equal weightings, the optimum prediction can be made by using the first two or three needs and their satisfactions. If the reliability of the scales could be increased, the prediction would probably improve with the inclusion of one or two more needs. The use of multiple correlation might also be expected to improve the prediction. There seems to be a fairly good indication here that the measure of the extent to which each person's *most important* needs are satisfied yields the best prediction of his over-all satisfaction when equal weightings are used.

The question of whether any two or three needs would provide the same results might be explored. Suppose one were to study the relationship between the satisfaction of any two needs of each person and over-all satisfaction, might it not prove to be as great as for those measured as strongest? To test this and to explore further the data in the light of the theory, the following analysis was made.

TABLE 15  
CORRELATIONS BETWEEN OVER-ALL JOB SATISFACTION AND THE SATISFACTION OF NEEDS OF DIFFERING STRENGTH

Strength Rank of Need for Individual	Correlation between Over-all Satisfaction and Degree of Satisfaction of Need in <i>n</i> th Rank
1	.54**
2	.47**
3	.36*
4	.18
5	.21
6	.10
7	.10
8	.20
9	.34*
10	.20
11	.30*
12	.13

\*\*  $r$  is significantly different from zero at .001 level.

\*  $r$  is significantly different from zero at .01 level

TABLE 16  
CORRELATION BETWEEN OVER-ALL JOB SATISFACTION AND SATISFACTION IN EACH OF THE NEED AREAS

Need Area	Mean Rank	Correlation between Over-all Satisfaction and Satisfaction of Given Need
J. Creativity and Challenge	2.8	.51**
C. Mastery and Achievement	3.1	.42**
E. Social Welfare	4.9	.47**
H. Moral Value Scheme	5.1	.20
B. Affection and Interpersonal Relationships	5.2	.12
F. Self-expression	6.6	.15
D. Dominance	7.1	.27
A. Recognition and Approbation	7.5	.32*
K. Economic Security	7.8	.03
L. Independence	8.6	.02
G. Socioeconomic Status	8.9	.40**
I. Dependence	10.8	.14

\*\*  $r$  is significantly different from zero at .001 level.

\*  $r$  is significantly different from zero at .01 level.

We have already obtained the correlation between the satisfaction of each person's most important need and over-all satisfaction. Next, the same relationship was measured for each person's second strongest need alone; then for the third, and for each of the others. These correlations are presented in Table 15. To be consistent with the theory, the first correlation should be highest, and the others smaller in descending order. As expected, the first is highest, and the next few descend in order, but there are several unexpected high correlations at the lower end of the table. Is this psychologically explicable, or a chance occurrence, or is it due to some peculiarity of the instrument or the techniques of analysis employed? On suspicion that the latter was responsible, the data were examined in one more fashion. The mean ranking for the whole sample on each of the needs in Table 5 shows a considerable homogeneity among the individuals in the sample in the rankings of the relative strengths of the needs. Were this not so, the mean ranks, instead of running from 2.6 for Creativity and Challenge to 10.8 for Dependence, would all tend to center around 6, 7, and 8. We can, therefore, conceive of this listing of needs as forming a hierarchy for the sample. Theo-

retically, correlating satisfactions with each of the needs in the hierarchy and over-all satisfaction should result in a series of correlations, the largest one occurring with the Creativity and Challenge scale, the strongest-felt need for the sample, and the smallest with the Dependence scale, the weakest-felt. The correlations should array themselves in descending order. They are shown in Table 16.

There is a marked similarity between Tables 15 and 16. However, in Table 16 one can see what caused the unexpected high correlations in Table 15 to occur. Three needs seem out of place in Table 16 (assuming the validity of the hypothesis). They are Dominance, Recognition and Approbation, and Socioeconomic Status, three of the four assertive, aggressive needs. What has probably occurred is that a true measure of their strengths was not obtained—they are more important than people will admit or, more likely, than they are able to perceive. Our efforts at subtlety in the construction of the need-strength measures does not seem to have been successful in the case of these three needs at least.

In summary, the most accurate predic-

tion of over-all job satisfaction can be made from the measure of the extent to which each person's strongest two or three needs are satisfied. Since there is considerable homogeneity in the sample with respect to the relative importance of each of the needs measured, it makes little difference whether the individual's or the group's need hierarchy is used as the criterion of relative need strength. We would not expect this to be true in the case of a more heterogeneous group. The accuracy with which over-all job satisfaction may be estimated is limited by the probable existence of a constant error in the measurement of need strengths of three of the assertive or aggressive needs: viz., Dominance, Recognition and Approbation, and Socioeconomic status.

## VI. IMPLICATIONS FOR FUTURE RESEARCH

The results described in the previous chapter are, in general, consistent with the theoretical framework upon which the study was based. More important is the expectation that further research and investigation of the method would be rewarding. The major weaknesses in the present instrument are believed to be fairly well defined, thereby pointing rather directly to certain subsequent steps. The most serious question concerns the validity of the need-strength scales. It is accepted here that people are unable to perceive with any great accuracy the strengths of their own needs. Despite this, needs can be measured with some success through the use of projective techniques. The question is whether it will be possible to duplicate the success of the projective techniques through revision of the present instrument and, as was our goal, to provide a useful tool in this area for those untrained in the use of projective tech-

niques. It appears clear that increased subtlety of the need-strength measures is an essential preliminary to improvement of the present method.

As part of the work of improving the accuracy of the need-strength measurement, it is suggested that a validity study be conducted, comparing the results obtained on the questionnaire with other measures: clinical appraisals, projective measures.

As suggested earlier in the paper, study will be necessary to determine if it is possible to develop need-satisfaction profiles (or norms) for broad occupational groups (necessary if the method is to be used in guidance work) and for specific work environments (necessary if the method is to be used in personnel selection and placement).

These, briefly, are the essential steps which must be taken before the method can be fully evaluated and put to use if found adequate.

## VII. SUMMARY

This study describes an attempt to develop a theoretical conceptualization of job satisfaction having functional utility. The theory deals with human needs and their satisfaction. It is felt that the mechanisms which operate to make people satisfied or dissatisfied in general also make them satisfied or dissatisfied in their work. The theory formally stated is this:

Over-all satisfaction will vary directly with the extent to which those needs of an individual which can be satisfied in a job are actually satisfied; the stronger the need, the more closely will job satisfaction depend on its fulfillment.

Twelve needs were selected for investigation and a questionnaire constructed to determine how well job satisfaction could, in fact, be estimated from a measurement of need strengths and need satisfactions in work. The questionnaire contains five parts, three measuring need strengths, one measuring need satisfactions in work, and one measuring over-all job satisfaction (see Appendix).

The questionnaire was administered to a sample of 72 employed men. The subjects were mostly in the profes-

sional and semiprofessional occupational groups.

For this sample the strongest needs, as reported by self-ratings, were those for Creativity and Challenge, Mastery and Achievement, and Social Welfare (helping others); the weakest were those for Independence, Socioeconomic Status, and Dependence.

In analyzing the intercorrelations among the need-strength scales, two clusters of needs could be extracted. One group contained needs which were passive or hostility-restraining in nature; the other contained assertive, aggressive needs.

Several analyses were made to determine how well job satisfaction could be estimated from the other measures obtained. A coefficient of correlation equal to .58 was obtained between the mean satisfaction score of each person's two strongest needs and over-all satisfaction. Using the mean satisfaction of the three (or more) strongest needs reduced the accuracy of prediction.

There is some evidence which indicates that several of the assertive, aggressive needs are not being accurately measured, and that people tend to underrate the importance to themselves of these needs.

## APPENDIX

OCCUPATIONAL ATTITUDES SURVEY<sup>1</sup>

- (1) NEED-STRENGTH SCALES: PARTS A, C, AND E.
- (2) NEED-SATISFACTION IN WORK SCALES: PART D.
- (3) OVER-ALL JOB SATISFACTION SCALE: PART B.

The letters in the parentheses before each item serve to key it to one of the twelve needs in the list below. (In the questionnaire itself the parentheses were used by the respondents for marking their ratings.)

- (A) Recognition and Approbation<sup>2</sup>
- (B) Affection and Interpersonal Relationships
- (C) Mastery and Achievement
- (D) Dominance

<sup>1</sup> (12), Copyright 1950, Robert H. Schaffer, New York, N.Y.

<sup>2</sup> For definitions of the needs, see Chapter II, C above.

- (E) Social Welfare
- (F) Self-expression
- (G) Socioeconomic Status
- (H) Moral Value Scheme
- (I) Dependence
- (J) Creativity and Challenge
- (K) Economic Security
- (L) Independence

## DIRECTIONS

closely your feelings match those of the speaker. A rating of (5) would indicate that your feelings naire all at once, but it is best if you answer each part in order and do not skip around.

Please answer every question (except those concerning your identity, which you may omit if you wish).

Do not spend too much time answering each item. Your first impression is the important one.

Read the directions for each part very carefully. Since each part of this questionnaire is different, it is necessary to read the directions for each part to answer the questions correctly.

You are reminded that nobody except the investigator and his staff will ever see these questionnaires once they are returned. Employers and other cooperating groups will see only tabulated group results in which it will be impossible to identify any individual, so please feel free to answer the questions as truthfully and frankly as possible.

## PERSONAL DATA

Name: .....

Address: .....

*(You may omit the answers to the above if you wish)*

Age: .....

Name of your Occupation: .....

Describe the work you do: .....

Name of your employer: .....

What business is your employer in? .....

How long have you been in your present *job*? .....

How long have you been in your present *occupation*? .....

What are some of the other occupations you have been in?

Occupation

Length of time

.....	.....
.....	.....
.....	.....

What is your present salary? \$..... per week.

Would you be interested in finding out the results of this survey?

yes ..... no .....

Would you be willing to be contacted by one of the members of the staff for the purpose of having a one hour interview to discuss your answers to this questionnaire?

yes ..... no .....

## PART A

**DIRECTIONS.** In this section you will find statements made by different people when discussing certain aspects of their life and their work. As you read each statement see how closely the *feeling* expressed by the speaker *matches your own feelings*. **DO NOT** consider the actual situation the person is discussing, but try to understand the attitude he is expressing. Then rate each statement on how closely your feelings match those of the speaker. A rating of (5) would indicate that your feelings are in complete agreement with the speaker. A rating of (1) would mean that you don't agree at all with the speaker. The numbers between 1 and 5 are used to show amount of agreement. Feel free to use *all the numbers* in this table to show how much your feelings match those of the speaker:

- (5) complete agreement
- (4) very close agreement
- (3) fairly close agreement
- (2) slight agreement
- (1) no agreement at all

*Be sure to rate every statement.*

(A) 1. "The nice thing about this job is that when you do something well you know that you're going to *get the credit for it*."

(B) 2. "When you work as closely as we do it sometimes is difficult to prevent arguments. But I wouldn't trade it for anything. I've been working with this bunch for quite a few years and I think that's about the best thing here—the fact that I have *so many close friends*."

(C) 3. "Yes, I sometimes work pretty hard even when I don't have to. But that's just so I can know I did a good job. It's important for me to do a *good job according to my own standards*."

(D) 4. "I like being supervisor. There is a good feeling of satisfaction that comes with being able to give the orders rather than having to take them."

(E) 5. "When I think of the number of people that are benefitted as a direct result of my work I really feel swell. I wouldn't be doing anything else. *Doing work like this that gives me a chance to help those who need it is very important to me*."

(F) 6. "I like to be myself. That may sound funny, but just think of all the times when you have to act in a way that's different from what you know you are. None of that for me. I always like to act just as I think of myself."

(G) 7. "The reason I moved into this neighborhood is that here I can own one of the nicest houses on the block. If I moved into a higher-class community I would probably be living in a house that was far from being the nicest. I like the place I live in to be at least as nice as most around."

(H) 8. "I get my ideas of right and wrong from the Bible. Others may get theirs from other sources maybe; but just so long as you do have some set of rules by which you live, you're O.K. *It's important to have your life governed by something 'higher' like that*."

(I) 9. "I refused the chance for promotion for just one reason. Here my work is laid out for me and I know just what is expected of me. I'm working under the supervision of one of the best guys in the outfit. I like working for a guy like that—I know I'll get all the help and advice I need."

(J) 10. "It may give you an uncomfortable feeling to have to try something new on your own, something that hasn't been done before, *but I really like it*."

(K) 11. "What keeps me here at this place is that I know my job is permanent. I may not move ahead very rapidly or get such big salary increases, but I know that this company is here to stay and so is my job. That's what I need to feel comfortable—the knowledge that *my job is always going to be here for me*."

(L) 12. "Well, it's just that I don't like anybody telling me how to do things. Sure I take advice and orders from my bosses, but I don't particularly like it. *I mostly like to do things on my own, without having somebody telling me how*."

(A) 13. "I like to know that people know what I'm doing and that they appreciate it. I like to get some kind of appreciation from somebody that counts when I do something."

(B) 14. "*I like being with people*. I like my friends where I work; I like meeting new customers, and I like spending lots of time with my wife and kids."

(C) 15. "When I do something I like to do it well! That's a very important thing with me—knowing that I've done a good piece of work."

(D) 16. "I like being foreman because it gets you out of the rut and a little bit on the top of the heap. I like being able to tell my men how to do things correctly, and it gives me a good feeling that I know more than they and can tell them how things are to be done."



(E) 17. "I get a great kick out of helping people. I belong to a club that works to help orphans in Europe. I also spend some time working with poor people in this city. There's nothing as self-satisfying as knowing that you've done something to help some person not as well off as you."

(F) 18. "What I like about this job is that I can say what I think, do what I think I ought to and act just the way I feel."

(G) 19. "I like to be able to enjoy the things my friends have. If all my neighbors have cars, I want to be able to have one; if they can send their kids to a summer camp, I want to be able to send mine to one at least as nice."

(H) 20. "I have an idea of the important things in life. I know right from wrong and I live according to those ideals. I don't care what I could get for it, or what it is, if I don't think a thing is right, I just won't do it. For instance, I just junked my old car. If I had sold it to a dealer he would have sold it to somebody else, and the thing just doesn't have any more left to it. I may have lost money on the deal, but I live by a code."

(I) 21. "It's really a pleasure not to have the headaches of responsibility. When I have to do something new I always like to get somebody who knows more than I do to show me."

(J) 22. "I like to keep bumping into new problems. I like to figure out new ways of doing things and inventing things. I really enjoy having a problem that takes a lot of figuring on my part—it makes my work really interesting."

(K) 23. "I must know that my future income is secure. I don't need too much to make me happy, but I would like to be very sure that I'll have my income no matter how long I live."

(L) 24. "I like to be my own boss. Even though this job is not as good as some I might be in, at least here there is nobody to tell me what to do and how to do it. I work my own hours and do pretty much as I please. There's nothing like it."

(A) 25. "I think those people who write anonymous poems must be nuts. What's the sense of doing anything worthwhile if you're not going to get the credit for it? That's one of the most important things to me. When I do a good job I want people to know I did it."

(B) 26. "One of the best things in life is having a family that is always with you through thick and thin, and the same with old friends."

(C) 27. "Sure I like a hard job. Now look, I don't mean that I enjoy knocking myself out, but when I do something I want to be able to say when I'm finished, 'Well, George, you did a darn good job.' That gives me an awful lot of pleasure."

(D) 28. "There's really something to being a leader. It gives you a terrific feeling if you know more than those around you and if you can tell them how to do things correctly."

(E) 29. "Some folks down at the office call me the 'Boy Scout,' but that doesn't worry me. I just get a big kick out of helping people. If you can help some down-and-outer or give some poor kid a break it really makes your heart feel good. I may not be getting as much for myself as I could, but I'm willing to take the time and trouble to help others because it does me so much good."

(F) 30. "I have different moods like everybody else. What I want is to be able to let myself go and express those moods and feelings. Being able to express myself like that is very important to me."

(G) 31. "Keeping up with the Joneses? Sure I do. Doesn't everybody? I just feel uncomfortable if the people around me have more than I do."

(H) 32. "Living a good life according to my beliefs is very important to me. Some call it religion, some call it morals, or some just plain conscience; but whatever they call it, it means the same thing. I want all my actions to jibe with my fundamental beliefs."

(I) 33. "Why push and struggle to get to the top? Whenever I have to do something I haven't done before, I know Stan is always around to show me. It sure is comfortable to know that there is always somebody to help you when you need it."

(J) 34. "You know when I'm at my best? Just give me a tough problem—one where you can't get all the answers out of a book. That's when I can really get into it. Having to use my imagination to dream up some new things or to invent some new methods of solution is something that really gives me a kick."

(K) 35. "To me taking a chance is pretty silly. Why risk what you have for what you might get? I keep my money in the bank and don't fool around with investments. I just couldn't take a chance on losing anything."

(L) 36. "I don't like to have somebody over me. Even though my boss is nice, I just don't like the idea that he can direct me and tell me what to do. It's the same in my social life; I don't ever hang around with people who will tell me what to do. Even if they know more than I do, I still don't like the idea."

(A) 37. "You know I don't think I would enjoy doing any kind of work no matter what it might involve unless I got some kind of recognition for it."

(B) 38. "I just couldn't stand working by myself or being alone for much of the time. I like to have other people around me most of the time whether it's here at work or when I'm off."

(C) 39. "I like to do work that's just at my level. What I mean by that is that I like to do work that's challenging and yet that's easy enough for me to do a decent job at it."

(D) 40. "When they told me that I was going to take Sam's place (the straw boss on the job) I hesitated for a while, but when I thought how good it would be to be giving orders for a change instead of taking them, I decided that it was just what I needed."

(E) 41. "I guess when I really stop and think about it, my greatest satisfaction in life comes from helping others."

(F) 42. "About the best thing a man can do over the week-end is to let off a little steam. Some guys do it by bowling, others pull weeds out of their garden and others paint pictures. It's all for the same purpose though, and I think it's an important one. All week you have to go around acting like a stuffed shirt, so what better thing could you do on your time off than to act the way you like to—the way you *really* are."

(G) 43. "What counts with me is not just the amount of money I make, but whether my salary is about as large as other people I know. I hate to have to get along without many of the things my friends can afford."

(H) 44. "Look, I was offered a job paying more than this one by the XYZ Company, but I turned it down. The stuff they're making just isn't worth selling, and I don't care how much money I could make out of it, I don't think I'd sell junk like that. It's not worth what I'd have to put up with my conscience."

(I) 45. "If a man isn't really cut out to be great, the best thing he can do is to associate with somebody and to work under somebody who is. By working under a really top-notch man one can share a lot of the satisfactions of his accomplishments."

(J) 46. "To me it makes a job more interesting if I have to keep doing *new* things on my own, even if I have to take a chance on doing them wrong."

(K) 47. "I just couldn't feel relaxed at all unless I know that my job is pretty permanent and that when I'm unable to work any more that I'll have my retirement pay."

(L) 48. "Well, Burt's job is pretty good, and I guess I could have had it if I wanted, but the trouble is that the boss is around too much there. I like working on my *own* hook most of the time without *anyone* around giving orders."

*Be sure you have rated all 48 items in this part before going on to Part B.*

## PART B

**DIRECTIONS.** In this part you are to think about your **overall** feelings and attitudes about the job you now have. Try to be as accurate as possible in answering—remember, the information which you give as an individual will be held in strict confidence.

1. If I were to rate my general, overall feelings about my job, I would say that I *usually* (check one)

..... a. like it *extremely well*

..... b. like it *very much*

..... c. like it *quite a bit*

..... d. like it *fairly well*

..... e. like it *just a little*

..... f. neither like nor dislike it

..... g. *dislike* it

..... h. *hate* it

2. If I were to compare my feelings about my job with the feelings of all other working people (or, at least the ones I know) I would say that

(check one)

- ..... a. almost everybody likes their jobs better than I do
- ..... b. many people like their jobs more than I do
- ..... c. I like my job about as well as half of other people
- ..... d. I like my job more than many people
- ..... e. I like my job better than most people
- ..... f. I like my job better than practically anybody else

3. If I were to describe my overall satisfaction with my job (that is, how much I *like* it or *dislike* it) in one or two short sentences, I would say:

.....

.....

.....

.....

### PART C

**DIRECTIONS.** In this part you will find items relating to your personal *likes* and *dislikes*. Here you are to rate each item on how much you *like* or how closely you *agree* with the idea of each item. Use the numbers from (1) to (5) to show how much you like or agree with the idea according to this table:

- (5) like or agree with idea *completely*
- (4) like or agree with idea *very much*
- (3) like or agree with idea *quite a bit*
- (2) like or agree with idea *slightly*
- (1) don't like or agree with idea at all

Rate every item independently, using *any* or *all* of the numbers as often as you like. *Be sure to rate every item* by putting a number in every space.

When I see a play or movie, I usually like, or at least feel sympathetic with the individuals who—

(H) 1. do what they think is right regardless of personal consequences; those who never violate their principles of life.

(D) 2. seem to be the leaders; the ones who can tell others what to do and who are respected and followed by their subordinates.

(G) 3. "have done all right for themselves"; the ones who have managed to make enough money to live the way they want and who have good social and economic position.

(F) 4. say what they think, act as they feel and never do things just because others think them more proper.

Really enjoyable way to spend free time is—

(B) 5. being with family and friends. It isn't so much what you are doing, just as long as you can spend time with the people you like.

(C) 6. working on some hobby or skill, trying to improve your ability. Whether it's practicing golf strokes or working in a wood-working shop (or any similar activity) the important thing is to keep getting better and better at it.

(F) 7. "letting off some steam"; doing something where you can kind of let yourself go and not worry what others might think about it.

The pleasantest kinds of day-dreams are those concerning—

(A) 8. getting to be well known and recognized for something I have done which is really appreciated by others.

(G) 9. making money and getting into a good social position.

(K) 10. a long life of economic security, free from any worry about economic matters.

(D) 11. getting to be a stronger, more influential person, having more ability to direct others and have them follow me.

(I) 12. the heavy responsibilities somewhat taken off my shoulders; someone to do my worrying for me and to help me do the right things.

The things which must make being a child a very happy time are—

(K) 13. not having to worry about making a living. You know that your parents will support you and you don't have the economic worries of adults.

(B) 14. you get more real genuine love from your family than you ever get again in your life.

(I) 15. when you're a kid you can pal around with adults and older kids and can depend on them to help you out and teach you some things. When you're an adult you're more or less on your own and getting help from others is frowned upon.

(A) 16. getting to be recognized is easier in a group of children than in a group of adults. Sometimes you can really shine in the eyes of your friends by doing something that is really easy for you. It's much harder to do that when you're an adult.

When a man selects a hobby the important thing to consider is—

(C) 17. will it require enough skill so that he can really get some satisfaction from taxing his ability.

(E) 18. will his efforts produce anything worth-while in terms of happiness for others (e.g. fixing toys for orphan children before Christmas).

(F) 19. will it give him a chance to express himself.

(B) 20. will it give him a chance to make new acquaintances and meet new friends through interests in common things.

When I have a new job to do, something which I have never done before, I usually like to—

(L) 21. be left on my own to try it, whether or not I can do it correctly right away.

(J) 22. have to do some thinking and planning in an effort to figure out the right way to do it.

(I) 23. have somebody show me the right way to do it so I will be sure to do it right.

I admire and would like to be like the kind of man who

(H) 24. lives his life in accordance with a set of laws which always points out the right way of life for him.

(G) 25. always seems to make enough money to afford many things which I sometimes can't afford.

(J) 26. is always able to invent and create new things; who can meet new problems and solve them by his own skill.

(D) 27. seems to have the skill and knack for leading men and for getting others to follow his directions.

(E) 28. is always trying to help others; the man who gets his pleasure by giving happiness to others.

Assuming that I have my choice, I would want my epitaph to read somewhat like—

(E) 29. "... always interested in the welfare of his fellowman. His greatest satisfactions came with helping others."

(H) 30. "... lived in accordance with his ideals of righteousness. A man who had a credo and deviated not therefrom."

(L) 31. "... completely free. His life was not influenced by most of the pressures of life. He remained independent of..."

(A) 32. "... known and respected by many. His works were a constant source of admiration for him by the many who appreciated them."

(J) 33. "... blazing new frontiers by disregarding present methods and inventing new ones..."

If I were keeping a personal diary—one which nobody but me would ever see—the kind of entry which would give me satisfaction would be:

(K) 34. "At last I have a permanent job with a permanent income. Now, finally, I can relax and enjoy things without the constant worry about whether I'll be able to get a new job if the one I'm in finishes."

(C) 35. "Today I got transferred off that routine job. This one is tougher, but it sure feels good to have to try a little in order to do the work correctly."

(L) 36. "At last my supervisor isn't hanging around as much as he was at first. Boy, it sure feels swell not to have him around telling me how to do my work."

*Be sure you have rated all 36 items in this part before going on to PART D.*

## PART D

**DIRECTIONS.** In this section you are asked to rate your satisfactions with *specific* aspects of your work. *DO NOT* consider your attitude toward your job as a whole (you have already done that in another part of the questionnaire). As you read each statement, think about how well you are satisfied with the specific item. Let your feelings be your guide in rating these items.

Use this scale:

- (5) *completely* satisfied
- (4) *very well* satisfied
- (3) *well* satisfied
- (2) *slightly* satisfied
- (1) *not at all* satisfied

You can use *any* of the numbers as often as you like. *Rate every item.*

- (A) 1. On my job when I do a piece of work I know that I'll get enough praise and recognition for it.
- (B) 2. Where I work I get all the opportunity I want for making friends and enjoying the company of my fellow-workers.
- (C) 3. When I've finished a day's work I can really be satisfied with the knowledge that I've used all my skills and abilities.
- (D) 4. In the course of my work I have all the opportunity I might want to direct others.
- (E) 5. My work results in benefits to many people.
- (F) 6. My work offers me a real opportunity for self-expression.
- (G) 7. The income I receive from my job enables me to live in a manner which I consider adequate.
- (H) 8. I do not have to do anything on my job which is not in accordance with my ideas of right and wrong.
- (I) 9. In my work I get all the help and supervision I need.
- (J) 10. There is ample opportunity in my work to use my ingenuity and inventiveness.
- (K) 11. I feel that my job is a secure one.
- (L) 12. I have as much freedom as I want on my job.
- (A) 13. In my work I always get the credit I deserve for any work I do.
- (C) 14. I have to concentrate and put forth some effort to do my work, but it is not too hard for me.
- (J) 15. I often have to think up some new ways of doing things and solving problems in the course of my work.
- (B) 16. My job gives me plenty of opportunity to enjoy time with my family and friends.
- (L) 17. On my job I am free from too much supervision.
- (D) 18. I have as much responsibility as I want with respect to supervising the work of others.
- (E) 19. My work is as worthwhile as most others I would want to be in with respect to helping other people.
- (H) 20. In my job I am completely free of any worry about violating my religious or ethical values.
- (E) 21. On my job I can always act just the way I picture myself—I don't have to act like somebody else.
- (I) 22. I get all the help and advice that I need from my supervisors.
- (K) 23. My job is quite permanent. It will be there as long as I might want it. If not, I at least know that I'll always have some sort of adequate income.
- (G) 24. My present job enables me to have a good social standing.

## PART E

**DIRECTIONS.** In this part you will be asked to *imagine yourself in various occupations*. With each occupation are several aspects of that occupation which may or may not contribute to the satisfaction of workers in that occupation. You are to rate each one on *how important* it would be for your satisfaction if you were in that occupation, according to the following scale:

- (5) *of top importance* to my satisfaction
- (4) *very important* to my satisfaction
- (3) *quite important* for my satisfaction
- (2) *of slight importance* to my satisfaction
- (1) *of no importance* to my satisfaction



*DO NOT* consider your over-all liking or disliking of the occupation. Just take *each item separately* and rate it on whether or not it would be important to you if you were in the occupation. *Answer every item* even if you are not familiar with some of the occupations.

If I were a *policeman*, what I would like about the job is the fact that—

(K) 1. I would be a civil service employee and know that my job was secure and not subject to fluctuating business conditions.

(H) 2. the police enforce the laws, preventing those who might do wrong from harming other people.

(D) 3. the uniform of the police is a symbol of authority. When wearing that uniform I would know that my orders and directions would be followed.

(E) 4. the police department is an important agency in helping to alleviate suffering. The police are on hand at every disaster helping victims of accidents and fires and assisting the doctors.

If I were a *chemical engineer* what I'd like about it is the fact that I'd—

(J) 5. always have to face new and challenging problems for which I would always have to search for new solutions.

(C) 6. have fairly difficult work to do—difficult enough so that when I finished a job I could be pretty well self-satisfied with the job that I'd have done.

(A) 7. command respect and attention because of the high degree of skill required by the work. If I were to invent some new process or discover a new use for some substance my name would be associated with the discovery in all the professional journals and I would be respected throughout my profession.

If I were a *clergyman* (minister, priest or rabbi) what I would like about being in that profession would be that—

(H) 8. religious leaders are the ones who really show people how to lead the right kind of lives. They help bring religious teachings to the people and show them how to live according to their religions.

(D) 9. men in the clergy are leaders in their community. People look up to them and come to them for advice.

(E) 10. they give comfort and help to those who need it. They are a blessing to the needy.

If I were a *professional baseball player*, what I would like about that kind of work is the fact that—

(A) 11. there is a great deal of pleasure that comes with having a lot of fame. It must feel good to see your pictures in the newspapers and hear your name mentioned over the radio, and to have people stop you and ask for your autograph.

(G) 12. with the money I'd make in big-league playing, I'd really be able to live well. I could travel around staying in the nicest hotels, eating in the nicest restaurants without too much concern over how much it's all costing.

(B) 13. the team spirit that develops among members of the same team must really be strong. There is a good feeling that comes with being so close to your friends on the team and sharing your experiences with them.

(E) 14. a baseball player gives pleasure and happiness to thousands of people. It must make one feel very good to know that there might be thousands of kids in the grandstands who are having one of their happiest times watching the game.

If I were an *officer* in the *U.S. Army* the things that would contribute to my satisfactions in that job are the facts that—

(A) 15. military officers are people who are always looked up to and respected. Whether in a military or civilian group, the officer is recognized as being worth his salt.

(G) 16. as a commissioned officer with all the family allowances and other financial benefits one could live very comfortably and certainly very respectably. Most of the officers on a station are given nice homes to live in—and an officer of low rank might have a house as nice, or almost as nice, as one of the high-ranking officers.

(D) 17. there is a certain amount of satisfaction that comes with being in charge of a group of men—being able to direct them in their activities.

(H) 18. as an officer I could feel proud that my responsibility actually is the protection of our country.

If I were a *taxicab driver*, what I would like about the job would be the fact that—

(L) 19. I was my own boss, free to drive around wherever I wanted—choosing my own hours of work, and not having any boss around while I worked.

(F) 20. I could be myself. I could talk to the passengers and let them know what I think, and not have to behave in any special way.

(C) 21. you get to be such a skilled driver. A really experienced cab driver can handle a car perfectly. It's really something to be proud of.

(J) 22. there are so many times you have to use your brains to get out of a tough spot. There's no one around to tell you what to do. It's sometimes a real challenge to figure out your actions.

If I were a *laboratory technician* what would contribute to my satisfaction would be that—

(I) 23. I'd be working under scientists who knew much more than I and to whom I could really look to for advice, help, and leadership.

(C) 24. being a laboratory technician is really skilled and exacting work, and when you do your job properly you can really be proud of your work.

(J) 25. in a laboratory there are so many times when you really have to be inventive to be able to get your work done. There are lots of times you simply are forced to invent new ways of doing things. These problems would be exciting challenges.

If I were a *sailor* in the *U.S. Navy*, what would provide me my satisfaction on that job would be that—

(K) 26. no matter what happens you get your monthly pay check. It's always there for you no matter what happens. And then when you retire you know that you'll have your retirement pay.

(I) 27. you're never expected to do something on your own that you've never done before. If a new job ever comes up, the petty officer or one of the officers always shows you how to do it. There's always somebody around watching you so you never really have to take the responsibility if something goes wrong.

(B) 28. you make some very close friends in the Navy. Living close to your buddies the way you do there is a real chance for friendships and sharing of experiences.

If I were a *sculptor* what I would like about being in that field would be the fact that—

(J) 29. in art there is a great opportunity to create new and original ideas.

(B) 30. there is a common bond among artists and many friendships are established through a common interest and understanding.

(L) 31. a sculptor is free to live and work as he chooses. There is nobody to tell him how to work—he does so in whatever way pleases him.

(F) 32. In producing art works one can express one's feelings and emotions in a quite accepted way.

If I were a *motion picture producer* in Hollywood, what I would like about being in that kind of a job would be that—

(G) 33. such work would pay me enough to live a prosperous life. I could afford a beautiful home, an expensive car and all the other things that stand for success in one's business life.

(C) 34. whenever I completed a good picture I would get the satisfaction that comes with having done a difficult job well.

(D) 35. at times I would have as many as several hundred people under me and subject to my directions. Few people get such responsible positions.

If I were a *college professor*, what would make for my satisfaction in that job would be the fact that—

(L) 36. a teacher works on his own. He doesn't have to put up with constant supervision by his superiors.

(B) 37. the life-long friendships that teachers sometimes build up with their students are a constant source of satisfaction.

(K) 38. in most teaching jobs in colleges your appointment is quite permanent and you aren't likely to lose your job if you are doing satisfactory work.

(F) 39. teaching and lecturing allows a teacher to express his feelings and attitudes.

If I were an *apprentice shoe designer* what would be satisfying about that type of work would be that—

(F) 40. in that kind of work you have an ample opportunity for self-expression.

(I) 41. you could have all the help and advice you needed from the person for whom you worked.

(E) 42. you would be designing articles that would be useful and enjoyable for many people.

If I were a *club reporter* assigned to work with a well-experienced reporter, what I would enjoy about such work would be the fact that—

(A) 43. a newspaper reporter has a certain status. Wherever a reporter goes, people recognize him by his profession and respect him for it.

(H) 44. in reporting work you are performing a real service to the concept of democracy by bringing enlightenment to the people.

(I) 45. I could work under somebody as skilled as that. I could learn from him and know how to do the right things by watching him so I could avoid stupid errors.

If I owned a large amount of stock in a very big and prosperous company and my only duties were to attend occasional shareholders meetings, what I would like about that way of life would be the fact that—

(L) 46. I would be completely independent and not have to take orders from anybody.

(K) 47. I would have a practically guaranteed income for the rest of my days and would never have to worry about it.

(G) 48. I could live in a manner which is so often portrayed in books and in the movies, yet which is so seldom enjoyed in real life—being able to afford the best of everything.

*Be sure you have rated all 48 items in Part E.*

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